

36. NATURAL BRANCHING IN PAPAYA (*CARICA PAPAYA* L.)

Papaya (*Carica papaya* L.), native of tropical America, now widely spread in the tropics around the world, is a popular fruit and is also used to make fruit salad and all kinds of desserts. The fruit contains about 10% sugar, a number of vitamin A, some vitamin C and acts as a mild laxative. From the latex of unripe fruits papain is obtained; this is used as a tenderizer for meat, in the textile industry and for medicinal purposes (Foyet, 1972).

The papaya is normally a small unbranched soft wooded tree, almost a herb (Chandler, 1958) with latex vessels in all parts. Sometimes, due to an accident or injury in the apical part of the tree, branching takes place (Rao, 1991). In 1992, at

the Central Agricultural Research Institute, Port Blair, a few papaya trees were planted in the Residential area/Research Farm. One of the trees after giving an economic yield (250 fruits/tree) for two years produced five side branches under natural conditions, and all the five branches are bearing leaves and fruits, (each branch having 12-15 good sized fruits). It is worth noting that branching has taken place naturally, hence could be of great economic value and advantage.

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37. A NOTE ON *UTRICULARIA AUSTRALIS* R.Br. LENTIBULARIACEAE, IN SOUTH INDIA

(With one text-figure)

Utricularia australis R.Br. was collected from Tirumala hills of Chittoor district Andhra Pradesh, during botanical explorations. Review of literature and Indian herbaria revealed that this taxon is very rarely seen in the hills of South India. It was earlier reported by Saldanha and Nicholson (1976) from the hills of Karnataka State. Janardhanam and Henry (1992) reported that the turions (condensed axis bearing densely modified foliar segments as winter buds) were not seen in the Indian specimens of this taxon. However, the turions were observed in our specimens (Fig. 1). Based on its rare and limited distribution in South India, a taxonomic analysis was made to facilitate easy identification.

Utricularia australis R.Br. Prodr. 430. 1810; Gandhi in Saldanha & Nicolson, Fl. Hassan

563. 1976; Taylor in Steenis, Fl. Males. I. 8: 299. 1977 & in Kew Bull. Add. Ser. 14: 598. f. 184. 1989. Janardhanam and Henry in Bladder worts of India 1992. *U. flexuosa* sensu Clarke in Hook. f. Fl. Brit. India. p.p. quoad syn. *U. australis* R.Br., non Vahl 1804.

Rhizoids usually absent; stolons upto 25 cm long, filiform, terete. Foliar organs dichotomous, traps numerous on nodes and foliar segments. Flowers in racemes, calyx lobes subequal, ovate-oblong; corolla yellow, prominently gibbous at base; stamens 2; ovary globose, glandular; stigma 2-lipped, lower lip deltoid, ciliate along margin.

Ecology: Rare at high altitudes.

Fl. & Fr.: September - January.

Specimens Studied: Japali Pond, Tirumala hills (Chittoor dist., A.P.). MHR & MC

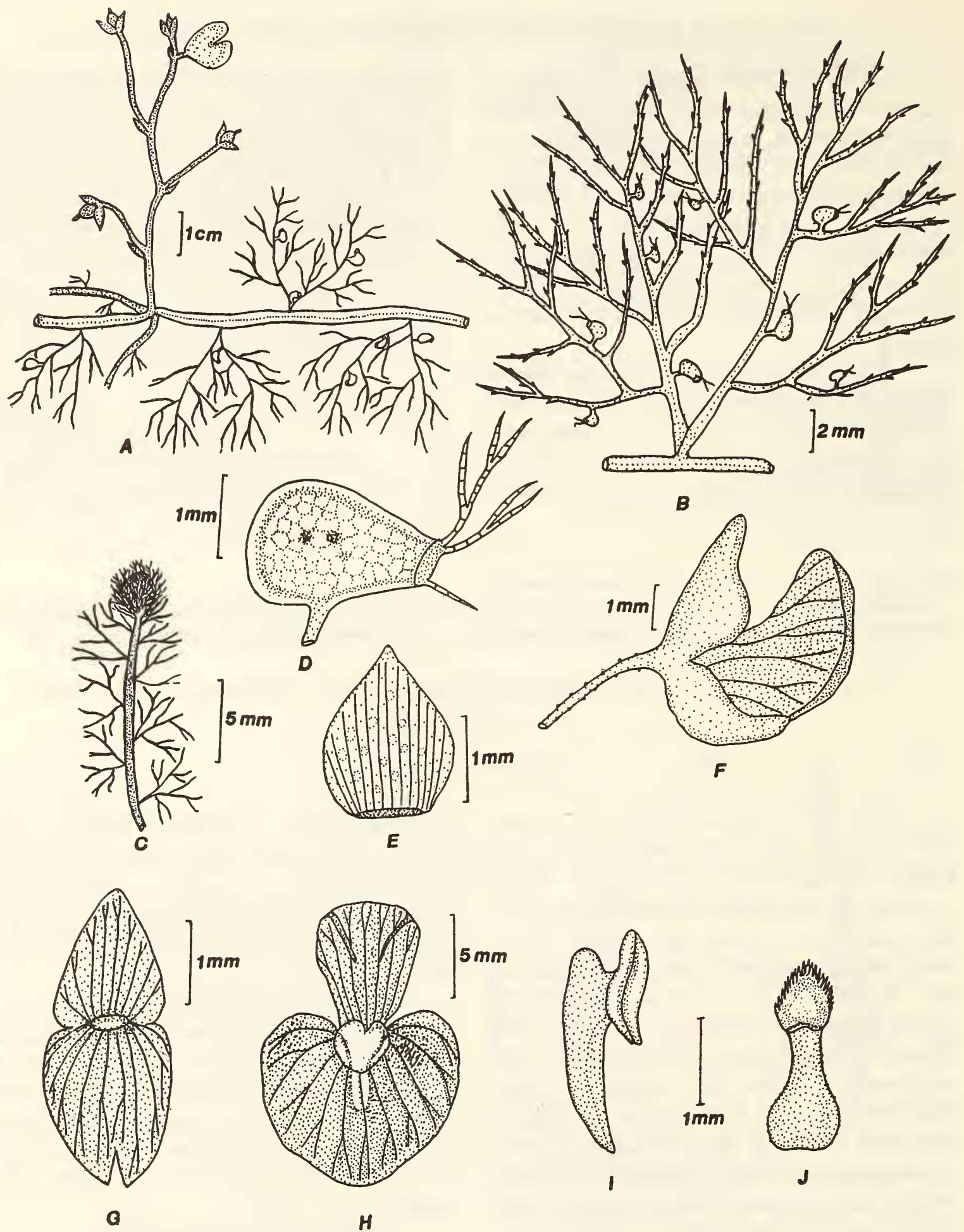


Fig. 1. *Utricularia australis* R. Br. A. Habit; B. Foliar organ; C. Turion; D. Trap; E. Bract; F. Flower; G. Calyx; H. Corolla; I. Stamen; J. Pistil.

14505; Arkalgud (Hassan dist., Karnataka), CJS June 15, 1996
11079.

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38. FIRST RECORD OF *PERISTYLUS MONTICOLA* (RIDL.) SEIDENF (ORCHIDACEAE) FOR INDIA FROM ANDAMANS

Peristylus monticola (Ridl.) Seidenf. previously known from Indonesia, the Philippines, New Guinea and Malaya has been located from Andaman Islands and reported for the first time from India. The genus *Peristylus* Bl. holds over 70 species of which over 28 species occur in India (Sathish Kumar and Manilal, 1994) and 3 species viz. *P. mannii* (Reichb. f.) Mukerjee, *P. monticola* (Ridl.) Seidenf and *P. parishii* Reichb. f. in Andaman-Nicobar Islands. *P. monticola* was collected by me from Saddle Peak of North Andaman and grown in my personal collection. The occurrence of this rare species in Andaman Island extends its known range of distribution to India.

Peristylus monticola (Ridl.) Seiden. & Dansk Bot. Arkiv. 31, 3: 35. t. 13. 1977; Seidenfaden & Wood Orch. Malay Pen. Singapore 103. t. 42. 104.

1992.

Terrestrial herbs, c. 50 cm high. Leaves oblong-lanceolate, 3-10 x 1-3 cm. Spikes 20-40 cm long. Flowers small, greenish-yellow. Spur as long as the sepals and petals.

Rare, in moss-covered hilly slopes, grows along with *Actinostachys digitata* (L.) Wall. ex Hook., *Eria muscicola* (Lindl.) Lindl., *Porpax elwesii* (Reichb. f.) Rolfe, etc.

Specimen examined: INDIA: North Andaman, Lower-Saddle Peak; + 600 m, 24.xi.1993, P.V. Sreekumar 16436 (PBL)

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39. ON THE PERIANTH BRISTLES IN *SCHOENOPLECTUS CORYMBOSUS* (ROTH EX ROEM. & SCHULT.) J. RAYNAL

(With one text-figure)

The genus *Schoenoplectus* is differentiated from the other genera of Cyperaceae by a complex of different characters. There is no single common character in all the species of this genus by which it can be separated from the other

genera. The characteristics of this genus are the spirally arranged glumes and the style not articulated with the ovary. However, these are common characters in many genera of Cyperaceae, hence it is not a natural genus. A